



HOKKAIDO UNIVERSITY

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Instructions for use

# HOMOPTEROUS INSECTS COLLECTED BY MR. TADAO KANO AT KOTOSHO, FORMOSA

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SHONEN MATSUMURA

(松 村 松 年)

A small collection of Homopterous insects from Kotosho (Botel Tobago) brought by Mr. TADAO KANO to the author may be the first concrete collection known in the scientific world. Viewing this material the author has convinced that the insects of this island may belong faunistically rather to the Formosan than to the Philippian group. As they are few in number, so it may be haphazard to justify it, and for that reason we must wait the next chance when a large number of insects are collected and studied.

The number of species collected by him is in total 21, a half of which are new to science, the others are most widely distributed all over the Oriental region. It is a very interesting fact, however, that here the author found two new genera, one belonging to *Membracidae* and the other to *Fulgoridae*. A list of those species is as follows:—

## Fam. *Cercopidae*

### Subfam. *Aphrophorinae*

#### 1. *Poophilus costalis* WALK.

*Ptyelus costalis* WALKER, List Hom., III, p. 107 (1851).

Distr.—Okinawa, Formosa, China, India, Singapore, Africa, Natal, Nyasaland.

#### 2. *Aphrophora botelensis* MATS. (n. sp.)

Distr.—Formosa (Kotosho).

#### 3. *Eoscarta kotoshonis* MATS. (n. sp.)

Distr.—Formosa (Kotosho).

## Fam. *Fulgoridae*

### Subfam. *Rilaninae*

#### 4. *Mindura subfasciata* STÅL

*Mindura subfasciata* STÅL, Ofv. Ver. Ak. Forh., XXVII, p. 770 (1870).

Distr.—Okinawa, Formosa, Philippines, Celebes.

4a. *Mindura subfasciata* f. *kotoshonis* MATS. (n. f.)

Distr.—Formosa (Kotosho).

5. *Nogodina kotoshonis* MATS. (n. sp.)

Distr.—Formosa (Kotosho).

Subfam. ***Issidae***

6. *Okissus kuroiwae* MATS.

*Okissus kuroiwae* MATSUMURA, Trans. Sapporo Nat. Hist. Soc., VI, p. 106 (1916).

Distr.—Okinawa, Formosa (Kotosho).

7. *Sarima pallizona* MATS. (n. sp.)

Distr.—Formosa (Kotosho).

7a. *Sarima pallizona* f. *midoriana* MATS. (n. f.)

Distr.—Formosa (Kotosho).

8. *Hemisphaerius kotoshonis* MATS. (n. sp.)

Distr.—Formosa (Kotosho).

Subfam. ***Derbinae***

9. *Zoraida kotoshoensis* MATS. (n. sp.)

Distr.—Formosa (Kotosho).

10. *Kotonisia* (n. g.) *kanoi* MATS. (n. sp.)

Distr.—Formosa (Kotosho).

Subfam. ***Cixiinae***

11. *Kirbyana pagana* MELICH.

*Kirbya pagana* MELICHAR, Hom. Faun. Ceylon, p. 38, T. II, f. 1, a, b, c (1903).

Distr.—Formosa, China, Ceylon.

12. *Mundopa kotoshonis* MATS.

*Mundopa kotoshonis* MATSUMURA, Ann. Zool. Japan., VIII, p. 430 (1914).

Distr.—Formosa (Kotosho).

13. *Brixioides carinatus* KIRKALDAY

*Brixioides carinatus* KIRKALDAY, Journ. Linn. Soc. Zool. London, p. 140, Pl. VI, f. 9 (1891).

Distr.—Formosa, Ceylon.

14. *Bidis vittata* MATS.

*Bidis vittata* MATSUMURA, Trans. Sapporo Nat. Hist. Soc., I, p. 31 (1905).

Distr.—Okinawa, Formosa.

Subfam. ***Delphacinae***

15. *Sogata furcifera* HORVATH

*Delphax furcifera* HORVATH, Term. Füzet, p. 372 (1899).

Distr.—Japan, Formosa, China, Singapore, Europe (Italy).

Subfam. ***Tropiduclinae***

16. ***Tambinia bizonata*** MATS.

*Tambinia bizonata* MATSUMURA, Ann. Mus. Nat. Hung., XII, p. 261 (1914).

Distr.—Formosa (Kotosho).

Fam. ***Jassidae***

17. ***Coelidia formosana*** MATS.

*Coelidia formosana* MATSUMURA, Trans. Sapporo Nat. Hist. Soc., V, p. 83 (1914).

Distr.—Formosa (Kotosho).

18. ***Nephrotettix apicalis*** MOTSCHULSKY

*Pediopsis apicalis* MOTSCHULSKY, Etud. Ent., p. 111 (1859).

Distr.—Japan, Formosa, China, Philippines, Singapore, Borneo, Sumatra, India, Africa.

Fam. ***Membracidae***

19. ***Tricentrus kotonis*** MATS. (n. sp.)

Distr.—Formosa (Kotosho).

20. ***Tricentrus kotonisulanus*** KATO

*Tricentrus kotonisulanus* KATO, Ins. World, XXXII, p. 8 (1928).

Distr.—Formosa (Kotosho).

21. ***Kotogargara* (n. g.) *botelensis*** MATS. (n. sp.)

Distr.—Formosa (Kotosho).

**Descriptions of new genera, new species and new forms**

***Aphrophora botelensis* n. sp.**

♀. Body testaceous yellow. Head in the middle fuscous, at the anterior margin acutely produced; face black except at the apex. Prothorax in the middle with a broad fuscous longitudinal stripe which gradually becomes narrower towards the anterior margin. Scutellum fuscous, being somewhat paler at the sides. The base of costa, the sutures, and the medial stripe which runs from near the middle to the apex, fuscous; veins at the claval region here and there with fuscous spots. Body beneath black, the last ventral and genital segments brownish, the former in the middle with a transverse elevation and at the hind margin nearly straight, the latter covered with short grayish hair. Legs marmorated with fuscous brown.

Length—9 mm.

Hab.—Formosa (Kotosho); one female specimen was captured by T. KANO.

In colour and markings it somewhat resembles *Ptyerus spumarius* L.

***Eoscarta kotoshonis* n. sp.**

♂. Body brownish testaceous. Face broadly sulcate, at the upper half with a series of 5 transverse black stripes on each side. Prothorax covered with short concolorous hair, transversely rugosely punctured. Scutellum very finely punctured and ovaly excavated in the middle. Elytra subopaque, in the middle at the costa with a large fuscous patch, at the apex (membrane) being broadly fuscous, with 2 or 3 subhyaline pale spots. Prosternum at the sides, mesosternum, and abdomen except the apex, black; genital and last abdominal segment yellowish; genital plates long and linear.

♀. Differs from the male in having a somewhat darker body, the face being provided with numerous transverse stripes.

Length—7 mm.

Hab.—Formosa (Kotosho); 3 (2 ♂, 1 ♀) specimens were collected by T. KANO.

***Mindura subfasciata* f. *kotoshonis* n. f.**

Differs from the typical form in lacking the whity pale marking at the basal half of the tegmina, having the central band which nearly opens in the claval end, being much acuminated, with 3 apical spots, the lower outer one being obsolete.

Hab.—Formosa (Kotosho); 5 (3 ♂, 2 ♀) specimens were collected.

***Nagodina kotoshonis* n. sp.**

Closely allied to *N. pallipennis* GUÉR. from Amboina.

♀. Body brownish fuscous, face and mesonotum on the sides yellowish. Vertex and pronotum more deeply excavated, the lateral ridges sharply elevated and of a yellowish colour. Frons with a fuscous v-shaped forked keel which is chain-like interrupted, the lateral ridges also fuscous; clypeus on each side with a series of short oblique fuscous stripes. Mesonotum with the lateral keels not reaching to the hind margin, the central keel yellowish, on each lateral side with 2 fuscous spots. Tegmina hyaline, nearly colourless, the veins brownish yellow. Costal membrane much narrower than the costal cell, with numerous cross-veins. Stigma wanting; from the basal cell rising 4 longitudinal veins which are traversed by the numerous cross-veins, representing comparatively a regular reticulation; the nets become smaller towards the apex before the membrane; some of the apical longitudinal veins forked. Both claval nerves white before the middle of claves, with 4 or 5 cross-veins. Wings hyaline, with a fuscous shade; veins fuscous, at the hind margin scarcely infuscated. Abdomen and legs brownish yellow, with fuscous markings.

Length of body 9 mm.; Expanse of the tegmina 26 mm.

Hab.—Formosa (Kotosho); one female specimen was collected at Kotosho by T. KANO.

***Sarima pallizona* n. sp.**

Pale brownish. Vertex much broader than long, the frontal transverse ridge somewhat arched. Frons somewhat longer than wide, dark brown, at the lower half before the clypeus with a large whitish transverse patch; on each side with a longitudinal series of paler granules, the longitudinal keels distinct, the middle one being not very distinct. Clypeus black. Pronotum in the middle obsoletely keeled. Scutellum with 3 keels towards the end obsolete. Tegmina with the cross-veins obsolete and of a paler colour, the anterior longitudinal veins nearly parallel to each other, the costal cross-veins obsolete, no rudimentary vein at the base, the hind wing infuscated. Legs paler than the body.

Length, 4 mm.; Exp. 10 mm.

Hab.—Formosa (Kotosho); 3 (1 ♂, 2 ♀) specimens were collected at Kotosho by T. KANO.

This resembles somewhat *S. illibata* MELICH. from Ceylon.

**f. *midoriana* n. f.**

Distinguished from the original specimen in having the body entirely olivaceous green.

Hab.—Formosa (Kotosho); one male specimen was collected by T. KANO.

***Zoraida kotoshoensis* n. sp.**

♀. Body pale testaceous, with no marking. Eyes black. Antennae with brownish granulose sensoria. Mesonotum shiny, scarcely darker in colour than on the other parts. Tegmina truncate at the apex, subhyaline, with a grayish colour, 3 costal longitudinal veins testaceous; costal membrane and postcostal area fulvous, oblique- and cross-veins dark brownish, at the apex on the costa with a brownish spot; apical first cross-vein broadly infuscated, at the apex with 4 whitish spots, respectively at the apices of the longitudinal veins and each end of the latter triangularly enlarged.

Length—5 mm.; to the apices of the tegmina 13 mm.

Hab.—Formosa (Kotosho); one female specimen was collected at Kotosho by T. KANO.

This species resembles somewhat *Z. motschulskyi* DIST.

***Hemisphaerius kotoshonis* n. sp.**

Body and legs olivaceous testaceous, not spotted. Head nearly double breadth of the length, frons wrinkled, somewhat longer than broad; clypeus

being black and shiny. Tegmina subhyaline, the quadrate form of the body being obscurely visible through their transparency. Anterior and middle femora black, the anterior tibia also black, with 3 whitish spots respectively at both ends and in the middle. Abdomen fuscous, with some testaceous markings, especially in the male.

Length—4.5–5 mm. (♂ ♀).

Hab.—Formosa (Kotosho); 4 (1 ♂, 3 ♀) specimens were collected at Kotosho by T. KANO.

This resembles somewhat *H. rufovarius* Wk., but it is easily distinguishable from the latter by its olivaceous colouration.

***Kotonisia kanoi* n. sp.**

Pale testaceous, scutellum pale brownish. Head and face with no marking, clypeus shiny. Antennae at the bases somewhat infuscated. Tegmina yellowish testaceous, costal membrane fuscous, becoming narrower at the basal one third; veins yellowish, at the apical half fuscous; one fuscous spot at the end of clavus and at the furcation of the 3rd longitudinal vein; apical veins mostly infuscated at the sides; along the apex with a transverse series of 8 paler spots which become obscure at the inner sides, except on both ends; at the 4th and 6th interspaces of the apical cells with each a fuscous spot; apical margin narrowly infuscated. Hind wings grayish, subhyaline, the veins fuscous. Legs somewhat darker than the ground colour.

Length—5 mm.; to the apices of the tegmina 8 mm.

Hab.—Formosa (Kotosho); one female specimen was collected at Kotosho by T. KANO.

***Kotonisia* n. g.**

Closely allied to *Nisia* MELICH., but differs from the latter as follows:—

Vertex and face not continuous, being separated by a sharp transverse carina, the lateral ridges distinctly diverging towards the clypeus. Rostrum very long, nearly reaching to the middle of the abdomen, the apical joint being very long. Mesonotum at the posterior part strongly excavated. Legs longer, the posterior tibia with no spine. Tegmina much narrower at the bases, at the apices somewhat truncated, costal membrane opaque, with no transverse vein; two series of transverse veins, the first in the middle, the second being mostly obsolete and at the apices 7 longitudinal veins of which 2, 3 and 5 are forked.

Genotype—*Kotonisia kanoi* MATS.

***Tricentrus kotonis* n. sp.**

Reddish brown, with short golden hair. Head and the anterior margin of

pronotum somewhat darker in colour; head somewhat broader than the pronotum, the punctures smaller than on the pronotum, at the clypeus the hair being finer and whitish. Compound eyes brownish gray. Horns of the pronotum long, distinctly protruding beyond the lateral margin, blunt at the apex, somewhat incurving; pronotal elongation paler in colour, at the apex infuscated. Tegmina with a light brownish tinge, having numerous semi-recumbent whitish hair, veins yellowish, the middle 2 cross-veins fuscous and shiny; apical membrane at the extreme apex narrowly infuscated. Body beneath fuscous, at the sides with short, whitish hair. Legs reddish brown, coxae and trochanters being darker.

Length—5 mm. (to the apices of tegmina).

This resembles somewhat *T. xiphistes* KATO from Kotosho, but differs from it in lacking a fuscous marking of the head and in having 2 cross-veins, and the apical margin of the tegmina narrowly, fuscous.

***Kotogargara botelensis* n. sp.**

♀. Brown, beneath black, covered with thick recumbent grayish hair. Head dark brown rostrum brownish. Pronotum in the middle with the hair stripe-like longitudinally arranged; the pronotal elongation (seen from above) towards the apex with some oblique wrinkles; punctures on the disc somewhat rougher than on the head. Tegmina subhyaline, with a golden tinge, at the basal third brown, finely punctured, scattering a few granules, the veins being concolorous with the tegmina. Legs fuscous, tibiae and tarsi reddish brown. Ovipositor reddish brown, scarcely protruding beyond the polster.

Length—4 mm. (to the apices of tegmina).

Hab.—Formosa (Kotosho); one female was collected at Kotosho by T. KANO.

***Kotogargara* n. g.**

Closely allied to *Gargara* AN. et SERV., but differs from it in the following points:—

Pronotal elevation flat, not prisma-like elevated, near the middle transversely excavated, so that at the apical one-third somewhat elevated, the central keel being not high. Tegmina on the basal one-third of the costal region strongly punctured and in the corium scattered with a few granules.

Genotype—*Kotogargara botelensis* MATS.